

IT IS CLAIMED:

1. A medicament for ameliorating or reducing inflammatory symptoms related to premenstrual syndrome (PMS), premenstrual dysphoric disorder (PMDD), perimenopause, menopause, or administration of hormonal contraceptives in a female mammalian subject, comprising a stoichiometric amount of a non-alpha tocopherol or tocopherol metabolite composition and an omega-3 poly-unsaturated fatty acid, wherein said tocopherol or tocopherol derivative composition and said omega-3 poly-unsaturated fatty acid are present in an amount effective to reduce an inflammatory biomarker in said subject, wherein said non-alpha tocopherol composition comprises no more than about 10% alpha tocopherol.
2. The medicament of claim 1, wherein said tocopherol composition comprises no more than about 5% alpha tocopherol.
3. The medicament of claim 1, wherein said tocopherol composition comprises no more than about 2% alpha tocopherol.
4. The medicament of claim 1, wherein said tocopherol composition is selected from the group consisting of a beta-tocopherol enriched tocopherol composition, a delta- tocopherol enriched tocopherol composition and a gamma-tocopherol enriched tocopherol composition.
5. The medicament of claim 1, wherein said tocopherol comprises a gamma-tocopherol-enriched tocopherol composition.
6. The medicament of claim 5, wherein said tocopherol composition comprises at least about 60% gamma-tocopherol.
7. The medicament of claim 5, wherein said tocopherol composition comprises at least about 90% gamma-tocopherol.
8. The medicament of claim 1, wherein said tocopherol metabolite is a metabolite of gamma tocopherol, beta tocopherol or delta tocopherol.

9. The medicament of claim 8, wherein said metabolite is gamma-carboxy ethyl hydroxy chroman (gamma-CEHC).
10. The medicament of claim 1, wherein said tocopherol derivative is a tocotrienol.
- 5 11. The medicament of claim 1, wherein said omega-3 poly-unsaturated fatty acid is selected from the group consisting of docosahexaenoic acid (DHA), docosapentaenoic acid (DPA), eicosapentaenoic acid (EPA), eicosatetraenoic acid (ETA), octadecatetraenoic acid, (SDA), and octadecatrienoic acid (ALA).
- 10 12. The medicament of claim 11, which contains less than about 10% of an omega-6 poly-unsaturated fatty acid.
13. The medicament of claim 11, wherein said omega-3 poly-unsaturated fatty acid is DHA.
14. The medicament of claim 13, wherein said DHA comprises a ratio of greater than 10:1 DHA:EPA.
- 15 15. The medicament of claim 1, which further includes a flavonoid compound.
16. The medicament of claim 15, wherein said flavonoid is selected from the group consisting of quercetin, hesperetin and a mixture of quercetin and hesperetin.
- 20 17. The medicament of claim 1, which further comprises a mineral compound.
18. The medicament of claim 17, wherein said mineral compound is selected from the group consisting of copper, zinc, selenium, magnesium, calcium, molybdenum, manganese, chromium, iodine, iron and combinations thereof.
- 25 19. The medicament of claim 17, wherein said mineral compound is a divalent ion.
20. The medicament of claim 19, wherein said mineral compound is magnesium.
- 30 21. The medicament of claim 1, which further comprises a flavonoid compound and a mineral compound.

5                   22. The medicament of claim 21, wherein said tocopherol composition is a gamma-tocopherol enriched tocopherol composition consisting of greater than about 60% gamma tocopherol, said omega-3 polyunsaturated fatty acid is DHA, said flavonoid is a mixture of hesperetin and quercetin, and said mineral is magnesium.

10                 23. The medicament of claim 22, comprising 100-500 mg of a gamma-tocopherol enriched tocopherol composition, 100-1500 mg DHA, 10-500 mg quercetin, 10-500 mg hesperetin, and 10-500 mg magnesium.

15                 24. The medicament of claim 23, comprising about 300 mg of a gamma-tocopherol-enriched tocopherol composition consisting of at least 60% gamma-tocopherol, about 10% alpha-tocopherol, and about 30% delta-tocopherol; about 800 mg DHA; about 33 mg quercetin; about 66 mg hesperetin; and about 100 mg magnesium.

20                 25. The medicament of claim 1, wherein said medicament is contained in capsular or tablet form.

25                 26. The medicament of claim 25, wherein said tablet or capsular form comprises a plurality of capsules or tablets.

30                 27. The medicament of claim 25, wherein said medicament further comprises a flavonoid compound.

35                 28. The medicament of claim 25, wherein said medicament further comprises a mineral compound.

40                 29. The medicament of claims 1, wherein said medicament is contained in an edible or potable nutritional product.

45                 30. The medicament of claim 29, wherein said nutritional product further comprises a flavonoid compound.

50                 31. The medicament of claim 29, wherein said nutritional product further comprises a mineral compound.

55                 32. The medicament of claim 1, wherein said inflammatory symptoms are associated with PMS, PMDD, perimenopause or menopause.

60                 33. The medicament of claim 32, which further includes a flavonoid compound.

34. The medicament of claim 32, which further includes a mineral compound.

35. The medicament of claim 32, wherein said inflammatory symptoms are selected from the group consisting of acne, bloating, edema, weight gain, breast tenderness, dizziness, dysmenorrhea, fatigue, headache, hot flashes, nausea, diarrhea, constipation, palpitations, swellings of appendages, swelling of breasts, angry outbursts, violent tendencies, anxiety, tension, nervousness, difficulty concentrating, crying easily, depression, food cravings (sweets, salts), forgetfulness, irritability, increased appetite, mood swings, overly sensitive, desire to be alone, abdominal cramps, and backache.

36. The medicament of claim 35, wherein said inflammatory symptoms are selected from the group consisting of bloating, edema and weight gain.

37. The medicament of claim 1, wherein said inflammatory symptoms are associated with concomitant administration of a hormonal contraceptive.

38. The medicament of claim 37, wherein said hormonal contraceptive is an oral contraceptive.

39. The medicament of claim 37, which further includes a flavonoid compound.

40. The medicament of claim 37, which further includes a mineral compound.

41. The medicament of claim 1, wherein said inflammatory biomarker is white blood cell count (WBC).

42. The medicament of claim 1, wherein said inflammatory biomarker is C-reactive protein (CRP).

43. A kit comprising a medicament comprising a non-alpha tocopherol or tocopherol metabolite composition, an omega-3 poly-unsaturated fatty acid, optionally a flavonoid compound and optionally a mineral compound, wherein the components of said formulation are present in a plurality of tablet or capsule forms packaged in separate containers.

44. The kit of claim 43, wherein said kit further includes instructions for determining levels of WBC and/or CRP.

45. The kit of claim 44, wherein said kit further includes measurement means for determining levels of WBC and/or CRP.
46. A medicament for ameliorating or reducing inflammatory symptoms associated with PMS, PMDD, perimenopause or concomitant hormonal contraceptive use in a female mammalian subject, comprising a stoichiometric amount of a tocopherol or tocopherol derivative composition and an omega-9 poly-unsaturated fatty acid, wherein said tocopherol or tocopherol derivative composition and said omega-9 poly-unsaturated fatty acid are present in an amount effective to reduce an inflammatory biomarker in said subject.
47. The medicament of claim 46, wherein said tocopherol composition comprises at least 60% gamma tocopherol and less than about 10% alpha tocopherol, said omega-9 poly-unsaturated fatty acid is all cis 5,8,11 eicosatrienoic acid.
48. The medicament of claim 46, which further comprises a flavonoid.
49. The medicament of claim 48, wherein said flavonoid is selected from the group consisting of quercetin, hesperetin and a mixture of quercetin and hesperetin.
50. The medicament of claim 46, which further comprises a mineral.
51. The medicament of claim 50, wherein said mineral is magnesium.
52. The medicament of claim 46, which further comprises a flavonoid and a mineral.
53. The medicament of claim 46, wherein said inflammatory biomarker is selected from the group consisting of WBC and CRP.
54. A method of ameliorating or reducing one or more premenstrual symptoms in a female mammalian subject experiencing such symptoms or at risk for experiencing such symptoms, comprising administering to the subject a medicament comprising a stoichiometric amount of a non-alpha tocopherol or tocopherol metabolite, and an omega-3 poly-unsaturated fatty acid.

55. The method of claim 54, wherein said symptoms are selected from the group consisting of acne, bloating, edema, weight gain, breast tenderness, dizziness, dysmenorrhea, fatigue, headache, hot flashes, nausea, diarrhea, constipation, palpitations, swellings of appendages, swelling of breasts, angry outbursts, violent tendencies, anxiety, tension, nervousness, difficulty concentrating, crying easily, depression, food cravings, forgetfulness, irritability, increased appetite, mood swings, overly sensitive, desire to be alone, abdominal cramps, and backache.

5 56. The method of claim 54, wherein the subject is a human subject.

10 57. The method of claim 54, wherein said female human subject experiences one or more of said symptoms during luteal phase of her menstrual cycle.

58. The method of claim 54, wherein said symptom is dysmenorrhea occurring during late luteal phase or after onset of menstruation.

15 59. The method of claim 54, wherein said medicament further comprises a flavonoid compound.

60. The method of claim 54, wherein said medicament further comprises a mineral compound.

20 61. A method of reducing body fluid retention in a mammalian subject, comprising administering to the subject a medicament comprising a stoichiometric amount of a non-alpha tocopherol or tocopherol metabolite, and an omega-3 poly-unsaturated fatty acid.

25 62. The method of claim 61, wherein said medicament further comprises a flavonoid compound.

63. The method of claim 61, wherein said medicament further comprises a mineral compound.

64. The method of claim 61, wherein the subject is a female human subject.

25 65. The method of claim 64, wherein said female human subject is in the luteal phase of her menstrual cycle.

66. A method of reducing premenstrual weight gain in a female mammalian subject, comprising administering to the subject a comprising a

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stoichiometric amount of a non-alpha tocopherol or tocopherol metabolite, and an omega-3 poly-unsaturated fatty acid.

67. The method of claim 66, wheren said medicament further comprises a flavonoid compound.
- 5 68. The method of claim 66, wheren said medicament further comprises a mineral compound.
69. The method of claim 66, wherein said subject is a human female subject.
70. The method of claim 69, wherein said weight gain occurs in luteal phase in said subject.
- 10 71. A method of reducing the amount of analgesic and/or anti-inflammatory medication required to reduce premenstrual symptoms in a female subject, comprising administering to the subject an effective amount of a medicament comprising a stoichiometric amount of a non-alpha tocopherol or tocopherol metabolite, and an omega-3 poly-unsaturated fatty acid.
- 15 72. The method of claim 71, wherein said medicament further comprises a flavonoid compound.
73. The method of claim 71, wherein said medicament further comprises a mineral compound.
- 20 74. The method of claim 71, wherein said subject is suffering from PMS, PMDD or perimenopause.